

In the Specification

Please replace paragraph [0005] with the following amended paragraph:

[0029] Referring to Fig. 4, an ECTRICKS acquisition for a number of imaging frames 77 is shown wherein the MR signal for the center of k-space is sampled more frequently than for outer or peripheral regions of k-space. For example, k-space data 76 may be partitioned into four, but equivalently sized regions A-D. The regions are divided by elliptical contour lines that represent the distance to the center of k-space. Since most of the signal comes from the center of k-space, i.e. region-A, this region is sampled more frequently than peripheral regions B, C, and D. During image reconstruction, linear interpolation is typically implemented to synthesize missing regions at any given point in time. For example, to reconstruct volumetric images of time frame 13, the A-region at frame 13 is used, the linear interpolation (~~(B)~~ (B')) of B-regions at frames 12 and 18 is used for the missing B-region data, the linear interpolation (~~(C)~~ (C')) of C-regions at frames 8 and 14 is used for the missing C-region data, and the linear interpolation (~~(D)~~ (D')) of D-regions at frames 10 and 16 is used for the missing D-region data. It should be noted that it is customary for contrast enhanced MR angiography to acquire a non-contrast mask volume (frames 1-4) to enable complex subtraction during reconstruction thereby allowing for background subtracted vessel-only images 78 to be generated.

Please replace paragraph [0029] with the following amended paragraph:

[0029] As previously stated, the length of the delay in the center of k-space sampling or the number of zero-encoding pulses depends on the prior region of k-space being sampled. In one embodiment, a linear approximation is used to determine the number of zero-encoding pulses to apply during data acquisition. For example, if five zero-encoding pulses are played out between acquisition of region-B and region-A then ten pulses would be played out between acquisition of region-C and region-A. Fifteen pulses would then be played out ~~used to disrupt steady-state conditions~~ between acquisition of region-D and region-A. As such, the total number of zero-encoding pulses played out during one pass of sampling, in the illustrated example, would be thirty. The number of pulses to play out can be determined empirically, but a total or base number of thirty pulses has been shown to substantially reduce intensity variations to the basic noise level in the acquisition. One skilled in the art will appreciate that different scan parameters may require non-linear pulse values or a base value more or less than thirty. Further, one zero-encoding pulse represents a single unit of delay, therefore, multiplying the number of zero-

encoding pulses between samplings by the single unit of delay equals the total delay in sampling time between sampling a peripheral region and sampling the center of k-space.